

G. SEQUENCE LISTING

5 (1) GENERAL INFORMATION

(i) APPLICANT: Darrell Anderson, Nabil Hanna, John Leonard,
Roland Newman and Mitchell Reff and William H.
Rastetter

10 (ii) TITLE OF INVENTION: THERAPEUTIC APPLICATION OF
CHIMERIC AND RADIOLABELED
ANTIBODIES TO HUMAN B
LYMPHOCYTE RESTRICTED
15 DIFFERENTIATION ANTIGEN FOR
TREATMENT OF B CELL LYMPHOMA

(iii) NUMBER OF SEQUENCES: 8

20 (iv) CORRESPONDING ADDRESS:

(A) ADDRESSEE: IDEC Pharmaceuticals Corporation
(B) STREET: 11011 Torreyana Road
(C) CITY: San Diego
25 (D) STATE: California
(E) COUNTRY: USA
(F) ZIP: 92121

(v) COMPUTER READABLE FORM:

30 (A) MEDIUM TYPE: Diskette, 3.5 inch, 1.44 Mb
(B) COMPUTER: Macintosh
(C) OPERATING SYSTEM: MS.DOS
(D) SOFTWARE: Microsoft Word 5.0

35 (vi) CURRENT APPLICATION DATA:

(A) APPLICATION NUMBER:
(B) FILING DATE:
40 (C) CLASSIFICATION:

(viii) ATTORNEY/AGENT INFORMATION:

45 (A) NAME: Burgoon, Richard P. Jr.
(B) REGISTRATION NUMBER: 34,787
(C) REFERENCE/DOCKET NUMBER:

(ix) TELECOMMUNICATION INFORMATION:

50 (A) TELEPHONE: (619) 550-8500
(B) TELEFAX: (619) 550-8750

(2) INFORMATION FOR SEQ ID NO: 1:

5 (i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 8540 bases
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: circular

10 (ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: yes

15 (iv) ANTI-SENSE: no

(ix) SEQUENCE DESCRIPTION: SEQ ID NO: 1:

20	GACGTCGCGG CCGCTCTAGG CCTCCAAAAA AGCCTCCCTCA CTACTTCTGG AATAGCTCAG	60
	AGGCCGAGGC GGCCTCGGCC TCTGCATAAA TAAAAAAAAT TAGTCAGCCA TGCTATGGGGC	120
	GGAGAACATGGG CGGAACCTGGG CGGAGGTTAGG GGCGGGATGG GCGGAGTTAGG GGGCGGGACT	180
25	ATGGTTGCTG ACTAATTGAG ATGCATGCTT TGCACTACTTC TGCCCTGCTGG GGAGCCTGGG	240
	GACTTTCCAC ACCTGGTTGC TGACTAATTG AGATGCATGC TTGCTACT TCTGCTGCT	300
30	GGGGAGCCTG GGGACTTTCC ACACCCCTAAC TGACACACAT TCCACAGAAAT TAACTCCCT	360
	AGTTATTAAT AGTAATCAAT TACGGGGTCA TTAGTTCATCA GCCCATATAT GGAGTTCCGC	420
	GTTACATAAC TTACGGTAA TGCCCCGCCT GGCTGACCGC CCAACGACCC CCCGCCATTG	480
35	ACGTCAATAA TGACGTATGT TCCCATAAGTA AGCGCCAATAG GGACTTTCCA TTGACGTCAA	540
	TGGGTGGACT ATTTACGGTA AACTGCCCCC TTGGCAGTAC ATCAAGTGTA TCATATGCCA	600
40	AGTACGCCCC CTATTGACGTT CAATGACGGT AAATGGCCCG CCTGGCATTA TGCCAGTAC	660
	ATGACCTTAT GGGACTTTCC TACTTGGCAG TACATCTACG TATTAGTCAT CGCTATTACC	720
	ATGGTGATGC GGTTTGGCA GTACATCAAT GGGCGTGATGG AGCGGTTTGA CTCAACGGGA	780
45	TTTCCAAGTC TCCACCCCCAT TGACGTCAAT GGGAGTTTGT TTGGCACCA AAATCAACGG	840
	GACTTTCAA AATGTGCTAA CAACTCCGC CCATTGACGC AAATGGGGCG TAGGGCTGTA	900
	CGGTGGGAGG TCTATATAAG CAGAGCTGGG TACGTGAACCC GTCAAGATCGC CTGGAGACGC	960
50	CATCACAGAT CTCTCACCAT GAGGGTCCCC GCTCAGCTCC TGGGGCTCCT GCTGCTCTGG	1020
	CTCCCAGGTG CACGATGTGA TGGTACCAAG GTGGAAATCA AACGTACGGT GGCTGCACCA	1080
55	TCTGTCTTCA TCTTCCCGCC ATCTGATGAG CAGTTGAAT CTGGAACCTGC CTCTGTTGTG	1140
	TGCCCTGCTGA ATAACCTCTA TCCCAGAGAG GCCAAAGTAC ACTGGAAGGT GGATAACGCC	1200
60	CTCCAATCGG GTAATCCCCA GGAGAGTGTC ACAGAGCAGG ACAGCAAGGA CAGCACCTAC	1260

	AGCCTCAGCA GCACCCGTGAC GCTGAGCAAA GCAGACTACG AGAAACACAA AGTCTACGCC	1320
	TGCGAAGTC A CCCATCAGGG CCTGAGCTCG CCCCCTCACAA AGAGCTTCAA CAGGGGAGAG	1380
5	TGTTGAATTG AGATCCGTTA ACGGTTACCA ACTACCTAGA CTGGATTGCGT GACAACATGC	1440
	GGCCGTGATA TCTACGTATG ATCAGCTCG ACTGTGCCCTT CTAGTTGCCA GCCATCTGTT	1500
10	GTTTGGCCCTT CCCCCGTGCC TTCCCTTGACC CTGGAAAGGTG CCACCTCCAC TGTCCTTTCC	1560
	TAATAAAATG AGGAAATTGC ATCGCATTGT CTGAGTAGGT GTCATCTAT TCTGGGGGGT	1620
	GGGGTGGGGC AGGACAGCAA GGCGGGAGGT TGGGAAGACA ATAGCAGGCCA TCCTGGGGAT	1680
15	GCGGTGGGCT CTATGGAACC AGCTGGGGCT CGACAGCTAT GCCAAGTACG CCCCCCTATTG	1740
	ACGTCAATGA CGGTAATGG CCCGCCCTGGC ATTATGCCCA GTACATGACC TTATGGGACT	1800
20	TTCCCTACTTG CGAGTACATC TACGTATTAG TCATCGCTAT TACCATGGTG ATGGGGTTT	1860
	GGCAGTACAT CAATGGGCGT GGATAGCGGT TTGACTCAGG GGGATTTCCA AGCTCCACC	1920
	CCATTGACGT CAATGGGAGT TTGTTTTGGC ACCAAAATCA ACAGGACTTTT CAAAAATGTC	1980
25	GTAACAACTC CGCCCCATTG ACGCAAATGG CGGGTAGGCG TGACGGTGG GAGGTCTATA	2040
	TAAGCAGAGC TGGGTACCTC CTCACATTCA GTGATCAGCA CTGAAACACAG ACCCCCTGCAC	2100
	ATGGGTTGGA GCCTCATCTT GCTCTTCCCTT GTCGCTGTTG CTACGCGTGT CGCTAGCACC	2160
30	AAGGGCCCAT CGGTCTTCCC CCTGGCACCC TCCTCCAAGA GCACCTCTGG GGGCACAGCG	2220
	GCCCTGGGCT GCCTGGTCAA GGACTACTTC CCCGAACCGG TGACGGTGTG GTGGAACATCA	2280
35	GGCGCCCTGA CCAGCGGGCGT GCACACCTTC CCGGCTGTCC TACAGTCCTC AGGACTCTAC	2340
	TCCCTCAGCA CGGTGGTGAC CGTGCCTCTC AGCAGCTTGG GCACCCAGAC CTACATCTGC	2400
40	AACGTGAATC ACAAGCCCCAG CAACACCAAG GTGGACAAGA AACAGCAGGCC CAAATCTTGT	2460
	GACAAAACTC ACACATGCC ACCGTGCCA GCACCTGAAAC TCTGGGGGG ACCGGTCACTC	2520
	TTCCCTCTTCC CCCCCAAACC CAAGGACACC CTCTATGATCT CCCGGACCCC TGAGGTCACA	2580
45	TGGCGTGGTGG TGGACGTGAG CCACGAAGAC CCGTGGGTCA AGTTCAACTG TGACGTGGAC	2640
	GGCGTGGGAGG TGCTATAATGC CAAGACAAAG CCGGGGGAGG AGCAGTACAA CGACACGTAC	2700
	CCTGTTGGTCA CGCTCCTCAC CGTCTCGCAC CAGGACTGGC TGAATGGCAA GGAGTACAAG	2760
50	TGCAAGGTCT CCAACAAAGC CCTCCCGACCC CCCATCGAGA AAACCATCTC CAAAGCCAAA	2820
	GGGCAGCCCC GAGAACCCACA GGTGTACACC CTGGCCCCCAT CCCGGGATGA GCTGACCAAG	2880
55	AACCGGGTCA GCCTGACCTG CCTGGTCAAAGGCTCTATC CCACGGACAT CCCCCGGAG	2940
	TGGGAGGACA ATGGGAGGCC GGAGAACAC TACAAGACCA CGCCTCCCGT GCTGGACTCC	3000
60	GACGGCTCTT CCTTCCTCTA CAGCAAGCTC ACCGTGGACCA AGAGCAGGTG GCAGCAGGGG	3060
	AACGTCTCTT CATGCTCCGT GATGCTCATGAG GCTCTGCACA ACCACTACAC CGACAGAGGC	3120
	CTCTCCCTGT CTCCGGGTAA ATGAGGATCC GTTAACGGTT ACCAACTACC TAGACTGGAT	3180

	TCGTGACAAC	ATGCCGCCGT	GATATCTACG	TATGATCAGC	CTCGACTGTG	CCTCTAGTT	3240
5	GCCAGCCATC	TGTTGTTGC	CCCTCCCCG	TGCCTTCCCT	GACCTGGAA	GGTGCACTC	3300
	CCACTGTCT	TTCTTAATAA	AATGAGGAAA	TTCGATCGCA	TTGCTGAGT	AGGTGTCATT	3360
	GGCATGCTGG	GGATGCGGTG	GGCTCTATGG	AACCAGCTGG	GGCTCGACAG	CGCTGGATCT	3480
10	CCCGATCCCC	AGCTTTGCTT	CTCAATTCT	TATTCGATA	ATGAGAAAAA	AAGGAAAATT	3540
	AATTTAACAA	CCAATTCACT	AGTTGATTGA	GCAAATGCGT	TGCCAAAAAG	GATGCTTTAG	3600
15	AGACAGTGTT	CTCTGACACAG	ATAAGGACAA	ACATTATTCA	GAGGGAGTAC	CCAGAGCTGA	3660
	GACTCCTAAG	CCAGTAGTG	GCACAGCATT	CTAGGGAGRA	ATATGCTTGT	CATCACCGAA	3720
20	GGCTGATTCC	GTAGAGCCAC	ACCTTGGTAA	GGGCCAATCT	GCTCACACAG	GATAGAGAGG	3780
	GCAGGAGCCA	GGGCAGAGCA	TATAAGGTGA	GGTAGGATCA	GTGCTCTC	ACATTTGCTT	3840
25	CTGACATAGT	TGTTGTTGGG	GCTTGGATAG	CTTGGACAGC	TCAGGGCTGC	GATTTCGCGC	3900
	CAAACCTGAC	GGCAATCCTA	GGCTGAAGGC	TGGTAGGATT	TTATCCCCGC	TGCCATCATG	3960
	GTTGACCAT	TGAACCTGCAT	CGTCGCCGTG	TCCCAAATA	TGGGGATTGG	CAAGAACGGA	4020
30	GACCTACCC	GGCCTCCGCT	CAGGAACGAG	TTCAGTACT	TCCAAGAAC	GACCCACAA	4080
	TCTTCAGTGG	AAGGTTAACAA	GAATCTGGT	ATTATGGTAA	GGAAAACCTG	GTTTCCATT	4140
35	CCTGAGAAGA	ATCGACCTTT	AAAGGACAGA	ATTAATATAG	TTCTCAGTAG	AGAACTCAAA	4200
	GAACCACAC	GAGGAGCTCA	TTTCTTGCC	AAAAGTTGG	ATGATGCCCT	AAAGCTTATT	4260
	GAACAACCCG	AATTGGCAAG	TAAGTAGAC	ATGGTTGGG	TAAGTCGGAGG	CAGTTCTGTT	4320
40	TACCGAGAAG	CCATGAATCA	ACCAGGCCAC	CTTAGACTCT	TTGTGACAAG	GATCATCGCAG	4380
	GAATTGAAA	GTGACACGTT	TTTCCCAGAA	ATTGATTGG	GGAAATATAA	ACTCTCCCA	4440
45	GAATACCCAG	CGCTCCCTCTC	TGAGGTCCAG	GAGGAAAAAG	GCATCAAGTA	TAAGTTGAA	4500
	GTCTACGAGA	AGAAAGACTA	ACAGGAAGAT	GCTTCAAGT	TCTCTGCTCC	CCTCTAAAG	4560
	CTATGCATT	TTATAAGACC	ATGGGACTTT	TGCTGGCTTT	AGATCAGCT	CGACTGTGCC	4620
50	TTCTAGTTGC	CAGCCATCTG	TGTTGTTGCC	CTCCCCGTG	CCCTCCCTGA	CCCTGGAAAGG	4680
	TGCCACTCCC	ACTGTCTTT	CCTAATAAAA	TGAGGAAATT	GCATCGCATT	GTCTGAGTAG	4740
55	GTGTCAATTCT	ATTCTGGGGG	GTGGGGTGGG	GCAGGACAGC	AAGGGGGAGG	ATTGGGAAAGA	4800
	CAATAGCAGG	CATGCTGGGG	ATGCGGTGGG	CTCTATGGAA	CCAGCTGGGG	CTCGAGCTAC	4860
	TAGCTTTGCT	TCTCAATTTC	TTATTTGCT	AATGAGAAAAA	AAAGGAAAAT	TAATTTAAAC	4920
60	ACCAATTCA	TAGTTGATTG	AGCAATGCG	TTGCCAAAAA	GGATGCTTTA	GAGACAGTGT	4980
	TCTCTGCACA	GATAAGGACA	AAACATTATTC	AGAGGGAGTA	CCCGAGAGTG	AGACTCTAA	5040

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	CGTAGGCCA CACCTTGGTA AGGGCCAATC TGCTCACACA GGATAGAGAG GGCAAGGGGCC	5160
5	AGGGCAGAGC ATATAAGGTG AGGTAGGATC AGTTGCTCCT CACATTGCT TCTGACATAG	5220
	TTGTGTTGGG AGCTTGGATC GATCCTCTAT GGTTGAACAA GATGGATTGC ACAGCAGGTTTC	5280
	TCCGGGCCACT TGGGTGGAGA GGCTATTGGG CTATGACTGG GCACAAEADA CAATGGCGT	5340
10	CTCTGATGCC GCGCTGTTCC GGCTGTCAGC GCAGGGGGCGC CGGGTTCTTT TTGTCAAGAC	5400
	CGACCTGTCG GGTGCCCTGA ATGAACGTCA GGACGAGGCA GCGCGGCTAT CGTGGCTGGC	5460
15	CACGACGGGCG GTTCCCTGGC CAGCTGTGCT CGACGTTGTC ACTGAAGCGG GAAGGGACTG	5520
	GCTGCTATTG GGCAGAAGTGC CGGGGGCAGGA TCTCTGTCA TCTCACCTG CTCCTGCCGA	5580
20	GAAAGTATCC ATCATGGCTG ATGCAATGCG CGGCGCTGCAT ACGCTTGATC CGGCTACCTG	5640
	CCCATTGACAC CACCAAGCGA AACATGCGAT CGAGCGAGCA CGTACTCGGA TGAAGGCCGG	5700
	TCTTGTGATCAGGATGATC TGGACGAAGA GCATCAGGGG CTGCGGCCAG CGGAACGTGTT	5760
25	CGCCAGGCTCAAGGCGCGA TGCCCGACGG CGAGGATCTC GTCTGACGCC ATGGCGATGC	5820
	CTGCTTGCGG AATATCATGG TGAAAATGG CGCTTTTCT GTGATCATCG ACTGTGGCCG	5880
30	GCTGGGTGTC GCGGACCGCT ATCAGGACAT AGCGTTGGCT ACCCGTGATA TTGTCAAGA	5940
	GCTTGGCGGCAATGGCTG ACCGCTTCTC CGTGTCTTAC GGTATGCCG CTCGGATTC	6000
	GCAGGGCATC GCCTTCTATC GCCTTCTTGA CGAGTCTTC TGAGCGGGAC TCTGGGTTTC	6060
35	GAAATGACCC ACCAAGCGAC GCCCAACCTG CCATCACGAG ATTCGATT CACCGCCGCC	6120
	TTCTATGAAA GGTTGGGCTT CGGAATCGTT TTCCGGGACG CGGGCTGGAT GATCCTCCAG	6180
	CGCGGGGATC TCATGCTGGA GTTCTTCGCC CACCCCCACT TGTTTATTGTC AGCTTATAAT	6240
40	GGTTACAAAT AAAGCAATAG CATCACAAAT TTCACAAATA AAGCATTTT TTCACTGCAT	6300
	TCTAGTTGTG GTTGTCCAA ACTCATCAAT CTATCTTATC ATGCTGGAT CGCGGCCGCG	6360
45	ATCCCGTCGA GAGCTTGGCG TAATCATGGT CATAGCTGTT TCCTGTGTA ATTGTTATC	6420
	CGCTCACAAAT TCCACACAAAC ATACGAGCGG GAAGCATAAA GTGTAAGGCC TGGGGTGCCT	6480
50	AATGAGTGA CTAACCTACA TTAATTGCGT TGCGCTCACT GCGCGTTTC CAGTCGGGAA	6540
	ACCTGTCGTG CGAGCTGCAT TAATGAATCG GCCAACCGCG GGGGAGAGGC GGTTTGCCTA	6600
	TTGGGGCGCTC TTCCGCTTCC TCGCTCACTG ACTCGCTGCC CTGGCTCGTT CGCTGCCGGC	6660
55	GAGCGGTATC AGCTCACTCA AAGGGGGTAA TACGGTTATC CACAGAATCA GGGGATAACG	6720
	CAGGAAAGAA CATGTGAGCA AAAGGCCAGC AAAAGGCCAG GAACCGTAAA AAGGCCGCGT	6780
60	TGCTGGCGTT TTCCCATAGG CTCCGCCCTC CTGACGAGCA TCACAAAAAT CGACGCTCAA	6840
	GTCAGAGGTG GCGAAACCCG ACAGGACTAT AAAGATACCA GCGCTTTCCC CCTGGAAGCT	6900
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5	TCGTTCGCTC CAAGCTGGGC TGTTGTGCACG AACCCCCCGT TCAGCCCGAC CGCTGCGCCT	7080
	TATCCGGTAA CTATCGTCTT GAGTCCAACC CGGTAAGACA CGACTTATCG CCACTGGCAG	7140
	CAQCCCAFTG TAACACGGATT AGCAGAACCGA QQTATQTAQQ CQGTOQTAACA CAGTTCTTGA	7200
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	GTAGCCGGTG TTTTTTGTT TGCAAGCAGC AGATTACCGG CAGAAAAAAA GGATCTCAAG	7380
15	AAGATCCTT GATCTTTCT ACAGGGCTCG ACGCTCAGTG GAACGAAAAC TCACGTTAAC	7440
	GGATTTGGT CATGAGATTA TCAAAAGGA TCTTCACCTA GATCCTTTTA AATTAAAAAT	7500
20	GAAGTTTAA ATCAATCTAA AGTATATATG AGTAAACATTG GTCTGACAGT TACCAATGCT	7560
	TAATCAGTGA GGCACCTATC TCAGCGATCT GTCTATTTCG TTCACTCCATA GTGCCCTGAC	7620
	TCCCCGTGT GTAGATAACT ACGATAACGG AGGGCTTACG ATCTGGCCCC AGTGTGCAA	7680
25	TGATACCGCG AGACCCACGC TCACCGGCTC CAGATTTATC AGCAATAAAC CAGCCAGCCG	7740
	GAAGGGCGA GCCCAGAAAGT GGTCTTGCAA CTTTATCCGC CTCCCATCAG TCTATTAAATT	7800
30	GTTGCCGGGA AGCTAGAGTA AGTAGTTGCG CAGTTAATAG TTGCGCACAC GTTGTGCCA	7860
	TTGCTACAGG CATCGTGGTC TCACGCTCGT CGTTGGTAT GGCTTCATTC AGCTCCGGTT	7920
	CCCAACGATC AAGGGAGTT ACATGATCCC CCATGTTGTC CAAAAAGCG GTTAGCTCCT	7980
35	TCGGTCTCTC GATGTTGTC AGAAAGTAAGT TGGCCCGAGT GTTATCACTC ATGGTTATGG	8040
	CAGCACTGCA TAATTCCTT ACTGTCTATGC CATCCGTAAG ATGCTTTCT GTGACTGGTG	8100
40	ACTACTCAAC CAACTCATTC TGAGAATAGT GTATGCCGG ACCGAGTTGC TCTTGGCCCC	8160
	CGTCAATACG GGATAATACC GCGCCACATA GCAGAACATT AAAAGTGCTC ATCATTGGAA	8220
	AACGTTCTTC GGGCGAAAAA CTCTCAAGGA TCTTACCGCT GTTGAGATCC AGTTGATGT	8280
45	AACCCACTCG TGACCCAAAC TGATCTTCAG CATCTTTAC TTTCACCAACC GTTCTGGGT	8340
	GAGCAAAAC AGGAAGGCAA AATGCCGCAA AAAAGGGAAT AAGGGCGACA CGGAAATGTT	8400
50	GAATACTCAT ACTCTTCCTT TTTCAATATT ATTGAAGCAT TTATCAGGGT TATTGTCTCA	8460
	TGAGCGGATA CATATTGAA TGTATTTAGA AAAATAAACAA AATAGGGTTT CGCGCACAT	8520
55	TTCCCCGAAA AGTGCCACCT	8540

(3) INFORMATION FOR SEQ ID NO: 2:

60 (i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 9209 bases

(B) TYPE: nucleic acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: circular

5 (ii) MOLECULE TYPE: DNA (genomic)

 (iii) HYPOTHETICAL: yes

10 (iv) ANTI-SENSE: no

 (ix) SEQUENCE DESCRIPTION: SEQ ID NO: 2:

15	GACGTCGCGG CCGCTCTAGG CCTCCAAAAA AGCCTCCTCA CTACTTCTGG AATAGCTAG	60
	AGGCCGAGGC GGCCTCGGCC TCTGCATAAA TAAAAAAAAT TAGTCAGCC TGCATGGGC	120
	GGAGAACGGG CGGAACTGGG CGGAGTTAGG GGCGGGATGG GGCGGAGTTAG GGGCGGGACT	180
20	ATGGTTGCTG ACTAATTGAG ATGCATGCTT TGCACTACTTC TGCTGCTGG GGAGCCTGGG	240
	GACTTTCCAC ACCTGGTTGC TGACTAATTG AGATGCATGC TTGCACTACT TCTGCCTGCT	300
	GGGGAGCCCTG GGGACTTTCC ACACCCCTAAC TGACACACAT TCCACAGAAAT TAATCCCT	360
25	AGTTATTAAT AGTAATCAAT TACGGGGTCA TTAGTTCATCA GCCCATATAT GGAGTTCCGC	420
	GTTACATAAC TTACGGTAAA TGGCCCGCCT GGCTGACCAC CCAACGACCC CGGCCATTG	480
30	ACGTCAATAA TGACGTATGT TCCCATAGTA AGCCCAAATAG GGACTTTCCA TTGACGTCAA	540
	TGGGTTGACT ATTACCGTA AACTGCCAC TTGGCAGTAC ATCAAGTGTAA TCATATGCCA	600
35	AGTACGCCCTT CTATTGACGT CAATGACGGT AAATGGCCCG CCTGGCATTAA TGCCAGTAC	660
	ATGACCTTAT GGGACTTTCC TACTGGCG TACATCTACG TATTAGTCAT CGCTATTAC	720
	ATGGTGTATGC GGTGTTGGCA GTACATCAAT GGGGGTGGAT AGCGGTTGAA CTCAAGGGGA	780
40	TTTCCAAGTC TCCACCCCAT TGACGTCAAT GGGAGTTGT TTTGGCACCA AAATCAACGG	840
	GACTTTCCAA AATGTCGTAACAACTGCC CCATTGACGC AAATGGGGGG TAGGGCTGTA	900
45	CGGTGGGAGG TCTATATAAG CAGAGCTGGG TACGTGAACC GTCAAGATCGC CTGGAGACGC	960
	CATCACAGAT CTCTCACTAT GGATTTTCAG GTGCAGATTAA TCAGCTCCCT GCTAATCAGT	1020
	GCTTCAGTC TAATGTCAG AGGACAAATT GTTCTCTCCC AGTCTCCAGC AATCTCTGCT	1080
50	GCATCTCCAG GGGAGAAGGT CACAATGACT TGCAGGGCCA GCTCAAGTGT AAGTTACATC	1140
	CACTGGTTCC ACCAGAAAGCC AGGATCTCC CCCAACCCCT GGATTTATGC CACATCCAC	1200
55	CTGGCTTCTG GAGTCCCTGT TCGCTTCAGT GGCAGTGGGT CTGGGACTTC TTACTCTCTC	1260
	ACAATCAGCA GAGTGGAGGC TGAAGATGCT GCCACTTATT ACTGCCAGCA GTGGACTAGT	1320
	AACCCACCCA CGTTCGGAGG GGGGACCAAG CTGGAAATCA AACGTACGGT GGCTGCACCA	1380
60	TCTGTCTTCA TCTTCCCCGCC ATCTGTGAG CAGTTGAAAT CTGGAACACTGC CTCTGTTGTG	1440

	TGCTGTGA	ATAACTTCTA	TCCCCAGAGAG	GCCAAAGTAC	AGTGGAAAGGT	GGATAAACGCC	1500
	CTCCAATCGG	GTAACCTCCA	GGAGAGTGTC	ACAGAGCAGG	ACAGCAAGGA	CAGCACCTAC	1560
5	AGCCTCAGCA	GCACCCCTGAC	GCTGAGCAAA	GCAGACTACG	AGAAACACAA	AGTCTACGCC	1620
	TGCGAAGTC	CCCACATCAGGG	CCTGAGCTCG	CCCGTCACAA	AGAGCTTCAA	CAGGGGAGAG	1680
	TGTTGAATTG	AGATCCGTTA	ACGGTTACCA	ACTACCTAGA	CTGGATTCTGT	GACAACATGC	1740
10	GGCGTGTATA	TCTACGTATG	ATCAGCCTCG	ACTGTGCTT	CTAGTTGCCA	GCCATCTGTT	1800
	GTTCGCCCC	CCCCCGTGC	TTCTTGACC	CTGGAAGGTG	CCACTCCAC	TGTCCCTTCC	1860
15	TAATAAAATG	AGGAAATTGC	ATCGCATTGT	CTGACTAGGT	GTCATTCTAT	TCTGGGGGGT	1920
	GGGGTGGGGC	AGGACAGCAA	GGGGGAGGAT	TGGGAAGACA	ATAGCAGGCA	TGCTGGGGAT	1980
20	GCGGTGGGCT	CTATGGAACC	AGCTGGGCT	CGACAGCTAT	GCCAAGTACG	CCCCCTTATTG	2040
	ACGTCAATGA	CGGTAATGG	CCCGCCCTGGC	ATTATGCCA	GTACATGACC	TTATGGGACT	2100
	TTCTCTACTT	GCAGTACATC	TACGTATTAG	TCATCGCTAT	TACCATGGTG	ATGCGTTTT	2160
25	GGCAGTACAT	CAATGGCGT	GGATAGCGGT	TTGACTCACG	GGGATTTCGA	AGTCTCCACC	2220
	CCATTGACGT	CAATGGGAGT	TTGTTTGGC	ACCCAAATCA	ACGGGACTTT	CCAAATGTC	2280
	GTAACAACTC	CGCCCCATTG	ACGCAAATGG	CGGGTAGGCG	TGTACGGTGG	GAGGTCTATA	2340
30	TAAGCAGAGC	TGGGTACGTC	CTCACATTCA	GTGATCAGCA	CTGAACACAG	ACCCGTCGAC	2400
	ATGGGTTGGA	GCCTCATCTT	GCTCTTCCCT	GTGCGCTGTTG	CTACCGCTGT	CCTGTCAG	2460
35	GTACAACCTG	AGCAGCCTGG	GGCTGAGCTG	GTGAAGCCTG	GGGCTCTAGT	GAAGATGTCC	2520
	TGCAAGGCTT	CTGGCTACAC	ATTATTACAGT	TACAATATGC	ACTGGGTAAA	ACAGACACCT	2580
	GGTCGGGGCC	TGGAATGGAT	TGGAGCTATT	TATCCCGAA	ATGGTGTAC	TTCCTACAT	2640
40	CAGAAGTTCA	AAGGCAGGC	CACATTGACT	CGACAGCAAAT	CCTCCAGCAC	AGCCTACATG	2700
	CAGCTCAGCA	GCCTGACATC	TGAGGACTCT	CGGGTCTATT	ACTGTGCAAG	ATCGACTTAC	2760
45	TACGGCGGTG	ACTGGTACTT	CAATGCTGG	GGCGCAGGGA	CCACGGTCAC	CGTCTCTGCA	2820
	GCTAGCACCA	AGGGCCCAC	GGTCTTCCCC	CTGGCCACCT	CCTCCAAGAG	CACCTCTGGG	2880
	GGCACAGCGG	CCCTGGGCTG	CCTGGTCAAG	GACTACTTCC	CCGAACCGGT	GACGGTGTG	2940
50	TGGAACCTAG	GGCCCTGAC	CAGCGCGTG	CACACCTTCC	CGGCTGTCT	ACAGTCTCA	3000
	GGACTCTACT	CCCTCAGCAG	CGTGGTGACC	GTGCCCTCCA	GCAGCTTGGG	CACCCAGACC	3060
55	TACATCTGCA	ACGTGAATCA	CAAGCCCAGC	AAACACCAAGG	TGGACAAGAA	AGCAGAGGCC	3120
	AAATCTTGTG	ACAAAACCTA	CACATGCCA	CCGTGCCAG	CACCTGAACT	CCTGGGGGGA	3180
	CCGTCACTCT	TCCTCTTCCC	CCCCAAACCC	AAGGACACCC	TCATGATCTC	CCGGACCCCT	3240
60	GAGGTCACAT	GGCTGGTGGT	GGACGTGAGC	CACGAAGACC	CTGAGGTCAA	GTTCAACTGG	3300
	TACGTGGACG	GGGTGGAGGT	GCATAATGCC	AAGACAAAGC	CGGGGGAGGA	GCAGTACAAC	3360

	AGCACGTACC	GTGTGGTCAG	CGTCCTCACC	GTCCCTGCACC	AGGACTGGCT	GAATGGCAAG	3420
5	AGTACAAGT	GCAAGGTCTC	CAACAAAGCC	CTCCCAGCCC	CCATCGAGAA	AACCATCTCC	3480
	AAAGCCAAG	GGCAGCCCCG	AGAACCCACAG	GTGTACACCC	TGCCCCCATC	CCGGGATGAG	3540
	CTGACCAAGA	ACCAAGGTCAAG	CTTGACCTCTC	CTGTGTCAAG	CTCTCTATCC	CAGCGACATG	3600
10	GCCGTGGAGT	GGGAGAGCAA	TGGGCAGCGG	GAGAACAACT	ACAAAGACCAC	GCCTCCCGTG	3660
	CTGGACTCCG	ACGGCTCCTT	CTTCTCTACTC	AGCAAGCTCA	CCGTGGACAA	GAGCAGGTGG	3720
	CAGCAGGGGA	ACGTCTTCTC	ATGCTCCGTG	ATGCATGAGG	CTCTGCACAA	CCACTACACG	3780
15	CAGAAGAGCC	TCTCCCTGTC	TCCGGGTAAA	TGAGGATCCG	TTAACGGTTA	CCAACCTACCT	3840
	AGACTGGATT	CGTGACAAAC	TGCGCCCGTG	ATATCTACGT	ATGATCAGCC	TCGACTGTGC	3900
20	CTTCTAGTTG	CCAGCCATCT	GTGTTTGCG	CCTCCCCCGT	GCCTTCCCTTG	ACCTCTGGAAAG	3960
	GTGCCACTCC	CACTGTCTT	TCCTAATAAA	ATGAGGAAT	TGATCGCAT	TGTCCTGAGTA	4020
	GGTGTCAATT	TATTCTGGGG	GGTGGGGTGG	GGCAGGACAG	CAAGGGGAG	GATTGGGAAG	4080
25	ACAATAGCAG	GCATGCTGGG	GATGCGGTGG	GCTCTATGGA	ACCAGCTGGG	GCTGCACAGC	4140
	GCTGGATCTC	CCGATCCCCA	GCTTGTCTTC	TCAATTCTT	ATTGATCATAA	TGAGAAAAAA	4200
30	AGGAAAATTA	ATTTAACAC	CAATTCACTA	GTTGATTGAG	CAAATGCGTT	GCCAAAAAAGG	4260
	ATGCTTTAGA	GACAGTGTC	TCTGCACAGA	TAAGGACAAA	CATTATTCAG	AGGGAGTACC	4320
	CAGAGCTGAG	ACTCTTAAGC	CACTGAGTGG	CAACAGCATTC	TAGGGAGAAA	TATGCTTGTC	4380
35	ATCACCGAAG	CCTGATTCCG	TAGAGCCACA	CCTTGGTAAG	GGCCAATCTG	CTCACACAGG	4440
	ATAGAGAGGG	CAGGAGCCAG	GGCAGAGCAT	ATAAGGTGAG	GTAGGATCAG	TTGCTCCTCA	4500
40	CATTTCCTTC	TGACATAGTT	GTGTTGGAG	CTTGGATAGC	TTGGACAGCT	CAGGGCTGG	4560
	ATTTGCGGCC	AAACTTGACG	GCAATCTTAG	CGTGAAGGCT	GGTAGGATTT	TATCCCCGCT	4620
	GCCATCATGG	TTGACGACATT	GAACATGCATC	GTGCGCGTGT	CCCCAAATAT	GGGGATTGGC	4680
45	AAGAACGGAG	ACCTACCCCTG	GCCTCCGCCTC	AGGAACGAGT	TCAAGTACTT	CCAAAAGATG	4740
	ACCACAACT	CTTCAGTGG	AGGTTAACAG	AACTGGTGA	TTATGGTAG	GAAAACCTGG	4800
50	TTCTCCATT	CTGAGAAGAA	TCGACCTTTA	AAGGACAGAA	TAAATATAGT	TCTCAGTAGA	4860
	GAACCTCAAAG	AACCACCAAG	AGGAGCTCAT	TTCTTGCCA	AAAGTTGGA	TGATGCTTA	4920
	AGACTTATTG	AACAAACCGA	ATTGGCAAGT	AAAGTAGACA	TGTTTGGAT	AGTCGGAGGC	4980
55	AGTTCTGTTT	ACCGAGAAGC	CATGAATCAA	CCAGGCCACC	TTAGACTCTT	TGTGACAAGG	5040
	ATCATGCAGG	AATTGAAAG	TGACACGTTT	TTCCCGAGAA	TTGATTTGGG	GAATATAAA	5100
60	CTTCTCCCG	AATACCCAGG	CGTCCTCTC	GAGGCCAGG	AGGAAACAGG	CATCAAGTAT	5160
	AAGTTTGAAG	TCTACGAGAA	GAAAGACTAA	CAGGAAGATG	CTTCAAGTT	CTCTGCTCCC	5220

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	CTCCTAAAGC TATGCATTT TATAAGACCA TGGGACTTTT GCTGGCTTTA GATCAGCCCTC	5280
	GACTGTGCCT TCTAGTGGC AGCCCATCTGT TGTGGCCCCC TCCCCCGTGC CTTCCCTTGAC	5340
5	CCTGGAAAGGT GCCACTCCCC CTGTCCTTTG CTAATAAAAAT GAGGAAATTG CATGCCATTG	5400
	TCTGAGTAGG TGTCACTCTA TTCTGGGGGG TGGGGTGGGG CAGGACAGCA AGGGGGAGGA	5460
10	TTUGGAAJAC AAATAGCAGGC ATGCTGGGGA TCGGGTGGGC TCTATGGAAC CAGCTGGGC	5520
	TCGAGCTACT AGCTTTGCTT CTCATAATTCT TATTTGCATA ATGAGAAAAA AGGAAAATT	5580
	AATTTTAACA CCAATTCACT AGTTGATTGA GCAAATGCGT TGCCAAAAG GATGCTTTAG	5640
15	AGACAGTGT TCTTCACAG ATAAGGACAA ACATTATTCA GAGGGAGTAC CCAGAGCTGA	5700
	GACTCCTAACG CCAGTGAAGTG GCACAGCATT CTAGGGAGAA ATATGCTTGT CATCACCGAA	5760
20	GCCTGATTCC GTAGAGGCC ACCTTGGTAA GGCCCAATCT GCTCACACAG GATAGAGAGG	5820
	GCAGGAGCCA GGGCAGAGCA TATAAGGTGA GTTAGGATCA GTTGCCTCT ACATTGCTT	5880
	CTGACATAGT TGTGGGGGG GCTTGGATCG ATCCCTATG GTGAACAAG ATGGATTGCA	5940
25	CGCAGGTTCT CCGGCCGCTT GGGTGGAGAG GCTATTGGC TATGACTGGG CACAACAGAC	6000
	AATCGGCTGC TCTGATGCCG CGTGTTCGG GCTGTCACTGC CAGGGCGCC CGGGTCTTTT	6060
30	TGTCAAGACC GACCTGTCGG GTGCCCTGAA TGAACATGCA GACGAGGCAG CGCCGCTATC	6120
	GTGGCTGGCC ACGACGGGGC TTCCCTGCGC AGCTGTGCTC GACGTTGTCA CTGAAGCGGG	6180
	AAGGGACTGG CTCTATTGG CGAAGTGC GGGGCAGGAT CTCTGTCACT CTACCTTGC	6240
35	TCTTGCAGAG AAAGTATCCA TCATGGCTGA TGCATGGCGG CGGCTGCATA CGCTTGATCC	6300
	GGCTACCTGC CCATTCGACC ACCAAGCGAA ACATGCACTC GACGGAGCAG GTACTCGGAT	6360
40	GGAAGCGGT CTGGTGCATC AGGATGATCT GGACGAAGAG CATCAGGGC TCGGGCCAGC	6420
	CGAACTGTTG GCCAGGCTCA AGGCGCGCAT GCCCAGCGC GAGGATCTCG TCGTACCCA	6480
	TGGCGATGCC TGCTTGGCGA ATATCATGGT GGAAATGGC CGGTTTCTG GATTCACTG	6540
45	CTGTTGGCCGG CTGGGTGGTGG CGGACCGCTA TCAGGACATA GCGTTGGCTA CCCGTGATAT	6600
	TGCTGAAGAG CTGGCGGGG ATGGCTGAA CGGCTTCCCTG GTGCTTTACG GTATGCCCG	6660
	TCCCAGATTG CAGCGCATCG CCTTCTATCG CCTTCTTGCAC GAGTTCTTCT GAGGGGGACT	6720
50	CTGGGGTTCG AAATGACCGA CCAAGCGACG CCCAACCTGC CATCACGAGA TTTCGATTC	6780
	ACCGCCGCT TCTATGAAAG GTTGGGCTTC GGAATGTTT TCCGGGACGC CGGCTGGATG	6840
55	ATCCCTCCAGC CGGGGGATCT CATGCTGGAG TTCTTCGCC ACCCCAACTT GTTATTGCA	6900
	GCTTATAATG GTTACAATAA AAGCAATAGC ATCACAAATT TCACAAATAA AGCATTTTTT	6960
60	TCACTGCATT CTAGTTGTGG TTTGTCCAA CTCATCAATC TATCTTATCA TGCTGGATC	7020
	CGGGCCGCGA TCCCGTCAG AGCTTGGCGT ATCATGCTC ATAGCTGTTT CCTGTGTGAA	7080
	ATTGTTATCC GCTCACAATT CCACACAAACA TACGAGCCCG AACATCAAAG TGTAAGCCT	7140

	GGGGTGCCTA	ATGAGTGAGC	TAACTCACAT	TAATTGCGTT	GCGCTCACTG	CCCGCTTTCC	7200
5	AGTCGGAAA	CCTGTCGTGC	CAGCTGCATT	AATGAATCGG	CCAACGCGCG	GGGAGAGGCC	7260
	GTTTGCCTAT	TGGGCGCTCT	TCCGCTTCCT	CGCTCACTGA	CTCGCTGC	TGCGCTTTC	7320
	GGCTAACGACG	ACCCGCTATGA	CTCTCACTCAA	AGCCCGTAAAT	ACCGCTTATCC	ACACAAATCG	7380
10	GGGATAAACG	AGGAAAGAAC	ATGTGAGCAA	AAGGCCAGCA	AAAGGCCAGG	AACCGTAAAA	7440
	AGGCCGCGTT	GCTGGCGTTT	TTCCATAGGC	TCCGCCCCCC	TGACGAGCAT	CACAAAATC	7500
15	GACGCTCAAG	TCAGAGGTGG	CGAACACCGA	CAGGACTATA	AAGATACCA	CGCTTCCCC	7560
	CTGGAAGCTC	CCTCGTGC	CGCTCGTTC	CGACCCCGCC	GCTTACCGGA	TACCTGTC	7620
	CTTTCTCCC	TTGGGAAAGC	GTGGCGCTTT	CTCAATGCTC	ACGCTGTAGG	TATCTCAGTT	7680
20	CGGTGTAGGT	CGMTGCGTCC	AAGCTGGCT	GTGTGACAGCA	ACCCCCCGTT	CAGCCCGACC	7740
	GCTGCGCCTT	ATCCGGTAAC	TATCGTCTTG	AGTCCAACCC	GGTAAGACAC	GACTTATCGC	7800
25	CACTGGCAGC	AGCCACTGGT	AACAGGATTA	CGACAGCGAG	GTATGTAGGC	GGTGTACAG	7860
	AGTTCTTGAA	GTGGTGGCCT	AACTACGGCT	ACACTAGAACG	GACAGTATTT	GGTATCGCG	7920
	CTCTGCTGAA	GCCAGTTACC	TTCGGAAAAA	GAGTTGGTAG	CTCTTGATCC	GGCAAACAAA	7980
30	CCACCGCTGG	TAGCGGTGGT	TTTTTTGTTT	GCAAGCAGCA	GATTACCGCC	AGAAAAAAAG	8040
	GATCTCAAGA	AGATCCTTTG	ATCTTTCTA	CGGGGTCTGA	CGCTCAGTGG	AACGAAAC	8100
35	CACGTTAAGG	GATTTGGTC	ATGAGATTAT	CAAAAAGGAT	CTTCACCTAG	ATCCTTTAA	8160
	ATTAAAAATG	AAGTTTTAAA	TCAATCTAAA	GTATATATGA	GTAAACTTGG	TCTGACAGTT	8220
	ACCAATGCTT	AATCAGTGAG	GCACCTATCT	CAGCGATCTG	TCTATTTCTG	TCATCCATAG	8280
40	TTGCTTGACT	CCCCGTGTG	TAGATAACTA	CGATACGGGA	GGGCTTACCA	TCTGGCCCC	8340
	GTGCTGCAAT	GATACCGCGA	GACCCACGCT	CACCGCTCC	AGATTTATCA	GCAATAAAC	8400
45	AGCCAGCGG	AAAGGCCGAG	CGCAGAAGTG	GTCTCGAAC	TTTATCCGCC	TCCATCCAGT	8460
	CTATTAATTG	TTGCCGGGAA	GCTAGAGTAA	GTAGTTGCGC	AGTTAATAGT	TTGCGAACG	8520
	TTGTTGCCAT	TGCTACAGGC	ATCGTGGTGT	CACGCTCGC	GTGTTGGTAG	GCTTCATTCA	8580
50	GCTCCGGTT	CCAACGATCA	AGGCAGGTTA	CATGATCCCC	CATGTTGTGC	AAAAAAGCGG	8640
	TTAGCTCCTT	CGGTCTCCG	ATCGTTGTCA	GAAGTAAGT	GGCCGAGTG	TTATCACTCA	8700
55	TGGTTATGGC	AGCACTGCT	AATTCTCTTA	CTGTCATGCC	ATCCGTAAGA	TGCTTTCTG	8760
	TGACTGGTGA	GTACTCAACC	AAAGTCATTCT	GAGAATATG	TATGCGGGCGA	CCGAGTTGCT	8820
	CTTGGCCCGG	GTCAAATACCG	GATAATACCG	CGCCACATAG	CAGAACTTTA	AAAGTGTCA	8880
60	TCATTGGAAA	ACGTTCTTCG	GGGCAGAAC	TCTCAAGGAT	CTTACCGCTG	TTGAGATCCA	8940
	GTTCGATGTA	ACCCACTCGT	GCACCCA	ACT GATCTCAGC	ATCTTTACT	TTCACCGAGCG	9000

	TTTCTGGGTG AGCAAAAACA GGAAGGCAAA ATGCCGCAA AAAGGGATA AGGGCGACAC	9060
	GGAAATGTTG AATACTCATA CTCTTCCTTT TTCAATATTA TTGAAGCATT TATCAGGGTT	9120
5	ATTGTCTCAT GACCGGATAC ATATTTGAAT GTATTTGAA AAATAAACAA ATAGGGGTTC	9180
	CGGGCACATT TCCCCGAAAAA GTGCCACCT	9209

10 (4) INFORMATION FOR SEQ ID NO: 3:

(i) SEQUENCE CHARACTERISTICS:

15	(A) LENGTH: 54 bases (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear
20	(ii) MOLECULE TYPE: DNA (genomic)
	(iii) HYPOTHETICAL: yes
	(iv) ANTI-SENSE: no
25	(ix) SEQUENCE DESCRIPTION: SEQ ID NO: 3:

5' ATC ACA GAT CTC TCA CCA TGG ATT TTC AGG TBC AGA TTA TCA GCT 52
TC 3' 2

30 (5) INFORMATION FOR SEQ ID NO: 4:

(i) SEQUENCE CHARACTERISTICS:

35	(A) LENGTH: 30 bases (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear
40	(ii) MOLECULE TYPE: DNA (genomic)
	(iii) HYPOTHETICAL: yes
	(iv) ANTI-SENSE: yes
45	(ix) SEQUENCE DESCRIPTION: SEQ ID NO: 4:

50 5' TGC AGC ATC CGT ACG TTT GAT TTC CAG CTT 3'

30

(6) INFORMATION FOR SEQ ID NO: 5:

(i) SEQUENCE CHARACTERISTICS:

55

(A) LENGTH: 384 bases
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

5 (ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: yes

10 (iv) ANTI-SENSE: no

(ix) SEQUENCE DESCRIPTION: SEQ ID NO: 5:

15 ATG GAT TTT CAG GTG CAG ATT ATC AGC TTC CTG CTA ATC AGT GCT TCA GTC 51
ATA ATG TCC AGA GGG CAA ATT GTT CTC TCC CAG TCT CCA GCA ATC CTG TCT 102
20 GCA TCT CCA GGG GAG AAG GTC ACA ATG ACT TGC AGG GCC AGC TCA AGT GTA 153
AGT TAC ATC CAC TGG TTC CAG CAG AAG CCA GGA TCC TCC CCC AAA CCC TGG 204
ATT TAT GCC ACA TCC AAC CTG GCT TCT GGA GTC CCT GTT CGC TTC AGT GGC 255
25 AGT GGG TCT GGG ACT TCT TAC TCT CTC ACA ATC AGC AGA GTG GAG GCT GAA 306
GAT GCT GCC ACT TAT TAC TGC CAG CAG TGG ACT AGT AAC CCA CCC ACG TTC 357
30 GGA GGG GGG ACC AAG CTG GAA ATC AAA 384

(7) INFORMATION FOR SEQ ID NO: 6:

35 (i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 27 bases
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

40 (ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: yes

45 (iv) ANTI-SENSE: no

(ix) SEQUENCE DESCRIPTION: SEQ ID NO: 6:

50 5' GCG GCT CCC ACG CGT GTC CTG TCC CAG 3'

27

(8) INFORMATION FOR SEQ ID NO: 7:

(i) SEQUENCE CHARACTERISTICS:

5 (A) LENGTH: 29 bases
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

10 (ii) MOLECULE TYPE: DNA (genomic)

 (iii) HYPOTHETICAL: yes

15 (iv) ANTI-SENSE: yes

15 (ix) SEQUENCE DESCRIPTION: SEQ ID NO: 7:

5' GGS TGT TGT GCT AGC TGM RGA GAC RGT GA 3' 29

20 (9) INFORMATION FOR SEQ ID NO: 8:

(i) SEQUENCE CHARACTERISTICS:

25 (A) LENGTH: 420 bases
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

30 (ii) MOLECULE TYPE: DNA (genomic)

 (iii) HYPOTHETICAL: yes

35 (iv) ANTI-SENSE: no

35 (ix) SEQUENCE DESCRIPTION: SEQ ID NO: 8:

40	ATG GGT TGG AGC CTC ATC TTG CTC TTC CTT GTC GCT GGT GCT ACG CGT GTC	51
	CTG TCC CAG GTA CAA CTG CAG CAG CCT GGG GCT GAG CTG GTG AAG CCT GGG	102
	GCC TCA GTG AAG ATG TCC TGC AAG GCT TCT GGC TAC ACA TTT ACC AGT TAC	153
45	AAT ATG CAC TGG GTA AAA CAG ACA CCT GGT CGG GGC CTG GAA TGG ATT GGA	204
	GCT ATT TAT CCC GGA AAT GGT GAT ACT TCC TAC AAT CAG AAG TTC AAA GGC	255
	AAG GCC ACA TTG ACT GCA GAC AAA TCC TCC AGC ACA GCC TAC ATG CAG CTC	305
50	AGC AGC CTG ACA TCT GAG GAC TCT GCG GTC TAT TAC TGT GCA AGA TCG ACT	357
	TAC TAC GGC GGT GAC TGG TAC TTC AAT GTC TGG GGC GCA GGG ACC ACG GTC	408
	ACC GTC TCT GCA	420